

REMARKS

Claims 1-15, 21, and 22 are pending in this application. Applicants thank the Examiner for withdrawal of the final office action.

Rejection under 35 U.S.C. §112

In the July 31, 2006 Amendment, claim 1 was amended to further define exemplary embodiments of the present invention where the claimed urethane modifier was a water-based urethane modifier. Applicants noted in that Amendment that support for the “water-based” feature could be found at least in paragraphs [0010], [0022], [0027], [0030-0032], and [0036].

In this Office Action, the grounds of rejection state that the specification does not provide support for the limitation that the polyurethane modifier is water-based. Applicants respectfully again refer the Examiner to the aforementioned paragraphs. One of ordinary skill in the art would understand that a polyurethane modifier used, for example, in conjunction with an aqueous solution (paragraph [0010]), or aqueous mixture (paragraph [0022]) would be a water-based polyurethane. Also, paragraph [0027] describes blending the selected binder and the polyurethane modifier in water, and paragraphs [0030-0032] further describe the water-based polyurethane.

Paragraph [0036] discloses the use of a carboxylated polyurethane as recited in claim 21 in its disclosure of the aliphatic polyurethane elastomer. Accordingly, Applicants respectfully request that the rejections based on 35 U.S.C. §112, first paragraph be withdrawn.

Rejection under 35 U.S.C. 103(a)

Claims 1-15 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,146,705 to Heine (hereinafter "Heine") in view of U.S. Patent No. 3,525,779 to Hawkins (hereinafter "Hawkins"). In the July 31, 2006 Amendment, Applicants argued that neither Heine nor Hawkins teach or suggest a fiber mat having a water-based urethane modifier as recited in independent claims 1 and 11. In particular, the urethane modifiers described by Hawkins are all solvent based polyurethanes and would be incompatible with Heine or the present invention, which describe aqueous based processes.

In this Office Action, the grounds of rejection state that Hawkins teaches adding a minor amount of a polyurethane modifier to a binder such as novolac resins which the grounds of rejection state are a type of formaldehyde resin, citing col. 3, lines 21-26, and that the addition of the urethane modifier promotes the adhesion of the resin with "various other components." As such, the grounds of rejection conclude that it would have been obvious to one of ordinary skill in the art at the time of invention to have added a minor amount of urethane binder to the binder of Heine with the expectation that this would enhance the bonding of the resin with various other components and substrates. Applicants respectfully traverse this rejection.

Applicants note that epoxies as disclosed in Hawkins are thermosetting resins that, in the uncured form, contain one or more reactive epoxide or oxirane groups. Novolac resins are a type of epoxy resin. The epoxide groups of thermosetting epoxy resins serve as cross-linking points in the subsequent curing step, in which the uncured epoxy is reacted with a curing agent or hardener. Cross-linking may be accomplished

through the epoxide groups or through hydroxyl groups. As such, the use of the hydroxyl groups with the epoxy resins as discussed in Hawkins is typical of thermosetting epoxies. This typical thermosetting feature, therefore, would not suggest, as argued in the grounds of rejection, a broad conclusion that addition of a urethane modifier promotes the adhesion of a resin "with other components and substrates."

Further, this disclosure does not suggest use of a urethane modifier with the acrylic latex modifier used by Heine. As argued in the July 31, 2006 Amendment, Applicants maintain that the Hawkins and Heine systems are completely incompatible and the Hawkins polyurethanes would not be effective when combined with the resin in Heine. In addition, use of both a urethane modifier and another modifier would be repetitive, and is not suggested by either reference, alone or in combination. Accordingly, for these several reasons, reconsideration and withdrawal of the rejection is respectfully requested.

Conclusion

Applicants respectfully submit that the claims of the present application define patentable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number below.

Attached is a petition for a one month extension of time.

Respectfully submitted,

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